

TSRI 463.4

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

**TRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. 371**

INTERNATIONAL APPLICATION NO.  
PCT/US98/08677INTERNATIONAL FILING DATE  
29 April 1998PRIORITY DATE CLAIMED  
29 April 1997TITLE OF INVENTION  
ENZYMATIC DNA MOLECULES

APPLICANT(S) FOR DO/EO/US

Joyce, et al.

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1.  This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.
2.  This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.
3.  This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4.  A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5.  A copy of the International Application as filed (35 U.S.C. 371(c)(2))
  - a.  is transmitted herewith (required only if not transmitted by the International Bureau).
  - b.  has been transmitted by the International Bureau.
  - c.  is not required, as the application was filed in the United States Receiving Office (RO/US).
6.  A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7.  Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
  - a.  are transmitted herewith (required only if not transmitted by the International Bureau).
  - b.  have been transmitted by the International Bureau.
  - c.  have not been made; however, the time limit for making such amendments has NOT expired.
  - d.  have not been made and will not be made.
8.  A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9.  An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). - unsigned
10.  A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

## Items 11. to 16. below concern document(s) or information included:

11.  An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12.  An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13.  A FIRST preliminary amendment.
14.  A SUBSTITUTE specification.
15.  A change of power of attorney and/or address letter.
16.  Other items or information:
  - Return Receipt Postcard
  - Certificate of Express Mailing

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

INTERNATIONAL APPLICATION NO.

PCT/US98/08677

ATTORNEY'S DOCKET NUMBER  
TSRI 463.4

17.  The following fees are submitted:

**BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5) ) :**

Neither international preliminary examination fee (37 CFR 1.482)  
nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO  
and International Search Report not prepared by the EPO or JPO ..... \$970.00

International preliminary examination fee (37 CFR 1.482) not paid to  
USPTO but International Search Report prepared by the EPO or JPO ..... \$840.00

International preliminary examination fee (37 CFR 1.482) not paid to USPTO but  
international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... \$760.00

International preliminary examination fee paid to USPTO (37 CFR 1.482)  
but all claims did not satisfy provisions of PCT Article 33(1)-(4) ..... \$670.00

International preliminary examination fee paid to USPTO (37 CFR 1.482)  
and all claims satisfied provisions of PCT Article 33(1)-(4) ..... \$96.00

**CALCULATIONS PTO USE ONLY****ENTER APPROPRIATE BASIC FEE AMOUNT =****\$ 670.00**

Surcharge of \$130.00 for furnishing the oath or declaration later than  20  30 months from the earliest claimed priority date (37 CFR 1.492(e)).

**\$**

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	46 - 20 =	26	X \$18.00	\$ 468.00
Independent claims	5 - 3 =	2	X \$78.00	\$ 156.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$260.00	\$

**TOTAL OF ABOVE CALCULATIONS =****\$ 1294.00**

Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statement  
must also be filed (Note 37 CFR 1.9, 1.27, 1.28).

**\$****SUBTOTAL =****\$ 1294.00**

Processing fee of \$130.00 for furnishing the English translation later than  20  30 months from the earliest claimed priority date (37 CFR 1.492(f)).

**\$**

<b>TOTAL NATIONAL FEE =</b>		<b>\$ 1294.00</b>
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property	+	\$
<b>TOTAL FEES ENCLOSED</b>	=	<b>\$ 1294.00</b>

Amount to be: refunded	\$
charged	\$

a.  A check in the amount of \$ 1,294.00 to cover the above fees is enclosed.

b.  Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ to cover the above fees.  
A duplicate copy of this sheet is enclosed.

c.  The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any  
overpayment to Deposit Account No. 19-0962. A duplicate copy of this sheet is enclosed.

**NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.**

SEND ALL CORRESPONDENCE TO:

THE SCRIPPS RESEARCH INSTITUTE  
Office of Patent Counsel  
10550 North Torrey Pines Road, TPC-8  
La Jolla, California 92037

SIGNATURE:

Thomas Fitting

NAME

34,163

REGISTRATION NUMBER

**PCT****REQUEST**

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

Receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum)

463.4PC

**Box No. I TITLE OF INVENTION**

ENZYMATIC DNA MOLECULES

**Box No. II APPLICANT**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

 This person is also inventor.

THE SCRIPPS RESEARCH INSTITUTE  
10550 North Torrey Pines Road  
La Jolla, California 92037  
United States of America

Telephone No.  
(619) 784-2937Facsimile No.  
(619) 784-9399

Teleprinter No.

State (i.e. country) of nationality:

US

State (i.e. country) of residence:

US

This person is applicant  all designated States  all designated States except the United States of America only  the United States of America only  the States indicated in the Supplemental Box**Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

This person is:

JOYCE, Gerald F.  
837 4th Street  
Encinitas, California 92024  
United States of America

 applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality:

US

State (i.e. country) of residence:

US

This person is applicant  all designated States  all designated States except the United States of America only  the United States of America only  the States indicated in the Supplemental Box Further applicants and/or (further) inventors are indicated on a continuation sheet.**Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:  agent  common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

Telephone No.

(619) 784-2937

FITTING, Thomas  
THE SCRIPPS RESEARCH INSTITUTE  
10550 North Torrey Pines Road, TPC-8  
La Jolla, California 92037  
United States of America

Facsimile No.

(619) 784-9399

Teleprinter No.

 Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead  
indicate a special address to which correspondence should be sent.

## Continuation of Box No. III FURTHER APPLICANTS AND/OR (FURTHER) INVENTORS

*If none of the following sub-boxes is used, this sheet is not to be included in the request.*Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

BREAKER, Ronald R.  
 10116 Caminito Mulege  
 San Diego, California 92126  
 United States of America

This person is:

applicant only  
 applicant and inventor  
 inventor only *(If this check-box is marked, do not fill in below.)*

State (i.e. country) of nationality:

US

State (i.e. country) of residence:

US

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental BoxName and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

This person is:

applicant only  
 applicant and inventor  
 inventor only *(If this check-box is marked, do not fill in below.)*

State (i.e. country) of nationality:

State (i.e. country) of residence:

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental BoxName and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

This person is:

applicant only  
 applicant and inventor  
 inventor only *(If this check-box is marked, do not fill in below.)*

State (i.e. country) of nationality:

State (i.e. country) of residence:

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental BoxName and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

This person is:

applicant only  
 applicant and inventor  
 inventor only *(If this check-box is marked, do not fill in below.)*

State (i.e. country) of nationality:

State (i.e. country) of residence:

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box Further applicants and/or (further) inventors are indicated on another continuation sheet.

**Box No.V DESIGNATION OF STATES**

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

**Regional Patent**

AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT

EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT

EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT

OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

**National Patent (if other kind of protection or treatment desired, specify on dotted line):**

<input checked="" type="checkbox"/> AL Albania .....	<input checked="" type="checkbox"/> LT Lithuania .....
<input checked="" type="checkbox"/> AM Armenia .....	<input checked="" type="checkbox"/> LU Luxembourg .....
<input checked="" type="checkbox"/> AT Austria .....	<input checked="" type="checkbox"/> LV Latvia .....
<input checked="" type="checkbox"/> AU Australia .....	<input checked="" type="checkbox"/> MD Republic of Moldova .....
<input checked="" type="checkbox"/> AZ Azerbaijan .....	<input checked="" type="checkbox"/> MG Madagascar .....
<input checked="" type="checkbox"/> BA Bosnia and Herzegovina .....	<input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia .....
<input checked="" type="checkbox"/> BB Barbados .....	
<input checked="" type="checkbox"/> BG Bulgaria .....	<input checked="" type="checkbox"/> MN Mongolia .....
<input checked="" type="checkbox"/> BR Brazil .....	<input checked="" type="checkbox"/> MW Malawi .....
<input checked="" type="checkbox"/> BY Belarus .....	<input checked="" type="checkbox"/> MX Mexico .....
<input checked="" type="checkbox"/> CA Canada .....	<input checked="" type="checkbox"/> NO Norway .....
<input checked="" type="checkbox"/> CH and LI Switzerland and Liechtenstein .....	<input checked="" type="checkbox"/> NZ New Zealand .....
<input checked="" type="checkbox"/> CN China .....	<input checked="" type="checkbox"/> PL Poland .....
<input checked="" type="checkbox"/> CU Cuba .....	<input checked="" type="checkbox"/> PT Portugal .....
<input checked="" type="checkbox"/> CZ Czech Republic .....	<input checked="" type="checkbox"/> RO Romania .....
<input checked="" type="checkbox"/> DE Germany .....	<input checked="" type="checkbox"/> RU Russian Federation .....
<input checked="" type="checkbox"/> DK Denmark .....	<input checked="" type="checkbox"/> SD Sudan .....
<input checked="" type="checkbox"/> EE Estonia .....	<input checked="" type="checkbox"/> SE Sweden .....
<input checked="" type="checkbox"/> ES Spain .....	<input checked="" type="checkbox"/> SG Singapore .....
<input checked="" type="checkbox"/> FI Finland .....	<input checked="" type="checkbox"/> SI Slovenia .....
<input checked="" type="checkbox"/> GB United Kingdom .....	<input checked="" type="checkbox"/> SK Slovakia .....
<input checked="" type="checkbox"/> GE Georgia .....	<input checked="" type="checkbox"/> SL Sierra Leone .....
<input checked="" type="checkbox"/> GH Ghana .....	<input checked="" type="checkbox"/> TJ Tajikistan .....
<input checked="" type="checkbox"/> GM Gambia .....	<input checked="" type="checkbox"/> TM Turkmenistan .....
<input checked="" type="checkbox"/> GW Guinea-Bissau .....	<input checked="" type="checkbox"/> TR Turkey .....
<input checked="" type="checkbox"/> HU Hungary .....	<input checked="" type="checkbox"/> TT Trinidad and Tobago .....
<input checked="" type="checkbox"/> ID Indonesia .....	<input checked="" type="checkbox"/> UA Ukraine .....
<input checked="" type="checkbox"/> IL Israel .....	<input checked="" type="checkbox"/> UG Uganda .....
<input checked="" type="checkbox"/> IS Iceland .....	<input checked="" type="checkbox"/> US United States of America .....
<input checked="" type="checkbox"/> JP Japan .....	<input checked="" type="checkbox"/> Continuation in Part .....
<input checked="" type="checkbox"/> KE Kenya .....	
<input checked="" type="checkbox"/> KG Kyrgyzstan .....	
<input checked="" type="checkbox"/> KP Democratic People's Republic of Korea .....	
<input checked="" type="checkbox"/> KR Republic of Korea .....	
<input checked="" type="checkbox"/> KZ Kazakhstan .....	
<input checked="" type="checkbox"/> LC Saint Lucia .....	
<input checked="" type="checkbox"/> LK Sri Lanka .....	
<input checked="" type="checkbox"/> LR Liberia .....	
<input checked="" type="checkbox"/> LS Lesotho .....	
<input checked="" type="checkbox"/> VN Viet Nam .....	
<input checked="" type="checkbox"/> YU Yugoslavia .....	
<input checked="" type="checkbox"/> ZW Zimbabwe .....	

Check-boxes reserved for designating States (for the purposes of a national patent) which have become party to the PCT after issuance of this sheet:

.....

.....

.....

In addition to the designations made above, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except the designation(s) of \_\_\_\_\_.

The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

**Supplemental Box***If the Supplemental Box is not used, this sheet need not be included in the request.****Use this box in the following cases:***

1. If, in any of the Boxes, the space is insufficient to furnish all the information:  
in particular:

- (i) if more than two persons are involved as applicants and/or inventors and no "continuation sheet" is available:  
in such case, write "Continuation of Box No. ..." [indicate the number of the Box] and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient;
- (ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked:  
in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III;
- (iii) if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America:  
in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, European or OAPI patent) for the purposes of which the named person is applicant;
- (iv) if, in addition to the agent(s) indicated in Box No. IV, there are further agents:  
in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
- (v) if, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "parent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "Continuation" or "Continuation-in-part":  
in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;
- (vi) if there are more than three earlier applications whose priority is claimed:  
in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI.

2. If the applicant claims, in respect of any designated Office, the benefits of provisions of the national law concerning non-prejudicial disclosures or exceptions to lack of novelty:

Continuation of Box IV

BINGHAM, Douglas A.  
 LEWIS, Donald G.  
 HOLMES, Emily  
 THE SCRIPPS RESEARCH INSTITUTE  
 10550 North Torrey Pines Road, TPC-8  
 La Jolla, California 92037  
 United States of America

Continuation of Box V

US Serial No. 60/045,228, filed 29 April 1997 (29.04.97)

<b>Box No. VI PRIORITY CLA.</b>		Further priority claims are listed in the Supplemental Box <input type="checkbox"/>	
The priority of the following earlier application(s) is hereby claimed:			
Country (in which, or for which, the application was filed)	Filing Date (day/month/year)	Application No.	Office of filing (only for regional or international application)
item (1) US	29 April 1997 (29.04.97)	60/045,228	
item (2)			
item (3)			

*Mark the following check-box if the certified copy of the earlier application is to be issued by the Office which for the purposes of the present international application is the receiving Office (a fee may be required):*

The receiving Office is hereby requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s): (1)

#### Box No. VII INTERNATIONAL SEARCHING AUTHORITY

**Choice of International Searching Authority (ISA)** (If two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used): ISA / US

**Earlier search** Fill in where a search (international, international-type or other) by the International Searching Authority has already been carried out or requested and the Authority is now requested to base the international search, to the extent possible, on the results of that earlier search. Identify such search or request either by reference to the relevant application (or the translation thereof) or by reference to the search request:

Country (or regional Office): Date (day/month/year): Number:

#### Box No. VIII CHECK LIST

This international application contains the following number of sheets:	This international application is accompanied by the item(s) marked below:	
1. request : 5 sheets	1. <input type="checkbox"/> separate signed power of attorney	5. <input checked="" type="checkbox"/> fee calculation sheet
2. description : 140 sheets	2. <input checked="" type="checkbox"/> copy of general power of attorney	6. <input type="checkbox"/> separate indications concerning deposited microorganisms
3. claims : 6 sheets	3. <input type="checkbox"/> statement explaining lack of signature	7. <input type="checkbox"/> nucleotide and/or amino acid sequence listing (diskette)
4. abstract : 1 sheets	4. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s):	8. <input checked="" type="checkbox"/> other (specify): Transmittal Letter
Total : 165 sheets		

Figure No. \_\_\_\_\_ of the drawings (if any) should accompany the abstract when it is published.

#### Box No. IX SIGNATURE OF APPLICANT OR AGENT

*Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request):*

Thomas Fitting

For receiving Office use only	
1. Date of actual receipt of the purported international application:	2. Drawings: <input type="checkbox"/> received: <input type="checkbox"/> not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority specified by the applicant: ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid

For International Bureau use only	
Date of receipt of the record copy by the International Bureau:	